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10/058,832	01/30/2002	Paul Wanninger	32140-177788	2432
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/058,832  
Filing Date: January 30, 2002  
Appellant(s): WANNINGER ET AL.

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For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 9/23/2005 appealing from the Office action mailed 2/3/2004.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

3426684	Jacobson et al	2-1969
3403625	Jacobson et al	10-1968

4378256	Watson-Adams	3-1983
4724172	Mosser et al	2-1988

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

Claims 10, 12, 13, 15, 16, 18, 19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacobson et al (3,426,684 or 3,403,625).

Both patents to Jacobson disclose an additive for reducing erosion in a gun barrel by applying the additive to the cartridge, around the propellant charge (such as with a caseless cartridge), to the textile containing the propellant or in the wall of a consumable cartridge casing. The additives disclosed are molybdenum and tungsten either in elemental form or in the form of an oxide. The additive can comprise about 3 % of the propellant charge (col. 3, lines 25-33 and col. 4, lines 25-31).

#### ***Claim Rejections - 35 USC § 103***

Claims 11, 14, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al(3,426,684 or 3,403,625) as applied to claims 10, 12, 13, 15, 16, 18, 19, and 21 in further view of Watson-Adams(4,378,256) and Mosser et al(4,724,172).

Both patents to Jacobson disclose an additive for reducing erosion in a gun barrel by applying the additive to the cartridge, around the propellant charge, to the

textile containing the propellant or in the wall of a consumable cartridge casing. The additives disclosed are molybdenum and tungsten either in elemental form or in the form of an oxide. The additive can comprise about 3 % of the propellant charge. However, Jacobson et al does not disclose the use of lanthanide metal oxides.

Watson-Adams teaches a coating that is applied to the surface of projectiles. This coating causes an aluminum surface layer to build up inside the barrel and reduces the erosion of the metal inside the gun barrel.

Mosser et al teaches an improvement over the invention of Watson-Adams by using ceramic coatings as a better way to prevent metal erosion. These materials include cerium dioxide (col 11, lines 66-68, col 12, lines 31-35, and col. 13, lines 23-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the teaching of an improved coating to protect metal erosion provided by Mosser with the invention of Watson-Adams since Mosser suggests that these additives are an improvement to those taught by Watson-Adams. It would also be obvious to use the teachings of Mosser and Watson-Adams with a combustible cartridge disclosed by Jacobson to provide erosion resistance to guns that use combustible cartridges.

#### **(10) Response to Argument**

Applicant's main argument rests upon the language "wherein the shaped ammunition part contains 2 to 15 % of one or more erosion-reducing agent(s)." Applicant suggests that the prior art that has been applied does not disclose the claimed

percentage of the ammunition part versus the propellant that is recited in Jacobson.

The Examiner disagrees. It is well-known in the bullet/cartridge making art that caseless cartridge are common and that these caseless cartridges consist only of a pressed propellant. Thus the “ammunition part” is the same as the propellant. Jacobson discloses that the erosion reducing additive constitutes 3 % of the propellant charge and that it can be applied directly to the charge, this clearly meets that claim limitations. The shaped ammunition part is thus the same as the propellant charge disclosed in Jacobson and no separate casing is being used.

Applicant also argues that the erosion reduction is obtained by different means than in the references. This is not persuasive since applicant's claims do not recite any features of the erosion reduction that would be different than the prior art. Also, since the coatings are the same as the prior art, there is no indication that Applicant's invention would perform any differently than that of the prior art. Also, assuming arguendo, that the prior art have a protective coating that is different than the instant invention, the claims are of comprising scope and would not exclude any prior art reference that also has a protective coating. Also, the claims do not exclude the erosion reducing coatings that include aluminum that are applied as teaching references. Again, since the claim scope is “comprising”, any other components may be included.

The teaching references of Watson-Adams and Mosser show that it is known to reduce the erosion using certain layers and also teaches the composition of these layers. One would certainly look to a teaching that suggests a greater erosion reduction for cartridges when trying to improve erosion in an existing cartridge. The reference to

Mosser is a general one that teaches erosion resistant materials that are applied to metals, however, in col 11, lines 66-68, col 12, lines 31-35, Mosser indicates that these coatings are an improvement over the prior art and names Watson-Adams which is directed specifically to coatings that are applied to the surface of projectiles and cartridges. This coating causes an aluminum surface layer to build up inside the barrel and reduces the erosion of the metal inside the gun barrel.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
AILEEN FELTON  
PRIMARY EXAMINER

Conferees:

  
Jeffrey Gellner  
Michael Carone